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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 09/980,770 | 11/01/2001 | Paul Stanley Addison | 740789-052110 | 7507 |
| 26770 | 7590 | 04/27/2005 | EXAMINER | |
| DAVID S. RESNICK NIXON PEABODY LLP 100 SUMMER STREET BOSTON, MA 02110-2131 | | | JUNG, WILLIAM C | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3737 | |

DATE MAILED: 04/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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|------------------------------|--------------------------------------|---------------------------------------|--|
| Office Action Summary | Application No. 09/980,770 | Applicant(s) ADDISON ET AL. | |
| | Examiner William Jung | Art Unit 3737 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 48-51 and 56-69 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 48-51 and 56-69 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed January 13, 2005 have been fully considered but they are not persuasive.

After further consideration of the remark by the Applicant, Examiner respectfully disagrees with the Applicant. The applicant asserts that the Shusterman et al deals with prediction of cardiac arrhythmia based on ECG signals, however fails to teach specifics to "heart in Ventricular fibrillation" in claim 48, "heart in Ventricular fibrillation after the commencement of Cardio-pulmonary resuscitation" in claim 56 and "heart in atrial fibrillation" in claim 63. Although Shusterman et al do not explicitly states the above limitation, all limitation in claims 48 (b thru i), 56 (b-f), and 63 (b-e) are met along with the system connected to automatic external defibrillator (col. 3, lines 9-10). Therefore, Shusterman et al inherently disclose all limitation in claims 48, 56, and 63 and the rejection from the previous office action stands and restated below.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 48-51 and 56-69 are rejected under 35 U.S.C. 102(a) as being anticipated by *Shusterman et al* (US 5,967,995).

Claims 48, 56, 57, 59, 63, 64, and 66: Shusterman et al disclose a method of decomposition of waveforms in a cardiac signal comprising the steps of connecting electrode to a

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patient under Ventricular Fibrillation (VF), deriving analog input signal from the electrodes, sampling the analog input signals to derive the cardiac signal (ECG, EKG, EEG, etc.) digitizing the cardiac signal, employing wavelet transform analysis, extracting key elements from the wavelet transform, guiding emergency protocol (such as resuscitation) based on the signal analysis, statistical analysis of the outcome of the defibrillation shock, and determining the therapeutic intervention from the analysis (col. 2, lines 44-61; col. 3, lines 1-23; col. 3, lines 31-55; col. 4, lines 4-27; col. 4, line 66 – col. 5, line 20).

Claims 49-51, 58, 60-62, 65, and 67-69: Shusterman et al further disclose that the analytical method includes statistical or stochastic methods to predict likely signal output using minima and maxima. Although Shusterman et al do not specifically disclose Kohonen, Bayesian or Radial Basis Neural network, these are established statistical methods. Therefore, Shusterman et al's statistical and stochastic analysis of the cardiac signal may inherently includes or substitute to determine the analytical methods as described above.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

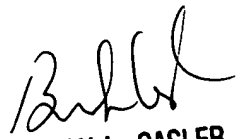
Any inquiry concerning this communication or earlier communications from the examiner should be directed to William Jung, Ph.D. whose telephone number is 571-272-4739.

The examiner can normally be reached on Mon-Fri 8:30 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on 571-272-4956. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

WJS
April 20, 2005


BRIAN L. CASLER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700